

CONNECTORS
OPERATION TESTS
USING A. E. CO.'S TEST SET
STEP-BY-STEP SYSTEMS

1. GENERAL

1.01 This section outlines a method of testing the local operating functions of local and combination connectors. The routine test of the toll functions of combination connectors is described in other sections of this division.

1.02 This section is reissued to incorporate material from the addendum in its proper location. In this process marginal arrows have been omitted.

1.03 Test number 99 should be dialed when performing this routine. All hunting connectors should pass by terminal 99 and stop on 90.

1.04 Any switch that fails to meet the requirements of this routine, should be made busy in the approved manner.

1.05 The test equipment specified in this section is designed to apply proper marginal tests (simulated critical circuit conditions) when the circuit under test and the test equipment have an applied voltage of 48.5 to 50. In those offices where power plants are normally operated at more than 50 volts, the battery voltage should be reduced and maintained within the required limits while the tests are being made.

2. APPARATUS

2.01 One Connector Test Set (A. E. Co's).

2.02 Six No. 375-A Make-busy Tools.

2.03 One No. 377-A Dialing Tool.

3. TEST SET PREPARATION

3.01 Connect the four-conductor cord equipped with No. 110 plugs which is a part of the test set to test line jacks No. 3-B and No. 4-B.

3.02 Insert the No. 377-A dialing tool into the ninth finger wheel hole of the dial.

4. METHOD

4.01 Insert the four-conductor cord equipped with a No. 240-A plug into the test jack of the connector under test. Lamp No. 1 should light, indicating a closure of the sleeve circuit.

Busy Line Test — Maximum Loop, Minimum Leak:

4.02 Dial the test number (99) and note that the connector steps to the ninth level and rotates to the ninth terminal. All hunting connectors should pass by terminals 99 and stop on 90. A failure of the connector to reach the test terminal is an indication of faulty adjustment of the pulse relay or retractile spring. Listen in the receiver for the busy signal which should be heard when the connector reaches the test terminals.

4.03 Operate and release the No. 2 key and note that the connector releases properly.

Idle Line Test — Maximum Leak, Minimum Loop:

4.04 Operate key No. 1 and dial the test number (99). Note that the connector steps to the ninth level and rotates to the ninth terminal. Lamp No. 2 should light, indicating that the connector has seized the test line terminals. All hunting connectors should pass by terminal 99 and stop on 90. A failure of the connector to reach the test terminals is an indication of faulty adjustment of the pulse relay or retractile spring. The bell in the test set should ring and the audible ringing signal should be heard in the receiver.

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4.05 Operate key No. 3 during the silent period for semi-selective ringing and during the ringing period for full selective ringing. The bell should stop ringing, which is an indication that the ringing relay in the connector has operated properly.

Note: If test outlined in this paragraph is performed on a non-reverse battery connector, key No. 4 should be operated in conjunction with key No. 3.

4.06 The buzzing sound in the receiver indicates a satisfactory talking circuit. If test (c) is not scheduled, release key No. 3 and operate key No. 2. Note that the connector releases properly. If test (c) is scheduled proceed as follows:

Supervisory Signal Test:

4.07 With keys No. 1 and No. 3 in the operated position, operate and release key No. 2 and note that the connector does not release.

The No. 2 shelf supervisory lamp should light while the No. 2 key is operated in offices not equipped with the delayed time feature. This operation checks the holding function of the connector when the calling party disconnects. Note that the No. 1 test set lamp is momentarily extinguished on all connectors except on certain types of combination connectors.

4.08 Restore the No. 3 key. The No. 1 shelf supervisory lamp should light in offices not equipped with the delayed time feature. This operation checks the holding function of the connector when the called party disconnects. Operate and release key No. 2 and the connector should release.

5. REPORTS

5.01 The required record of this routine should be entered on the proper form.